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Conference Abstract

Pipedream or pipeline: delivering regular, reliable, up-to-date information on biodiversity through repeatable workflows

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Abstract

The current paradigm for studies on biodiversity change are single studies, of finite duration, and a single published output. Yet the results of a such a workflow become out-of-date quickly, particularly as the speed of environmental change increases. If new environmental policies are implemented it is important to monitor their effects, which implies having results from before and after the policy implementation. Furthermore, given the difficulty of influencing policy, the results of analysis need to be reliable, have clearly communicated uncertainty, and should be open to scrutiny. The timely provision of such information could be possible by using open data, shared standards, and automation.

The TrIAS (Tracking Invasive Alien Species) project in Belgium is attempting to build a workflow from raw biodiversity data to policy advice, specifically to provide useful information on alien species and their associated risks. We are developing scripts (R, Python) to simplify the repeated Darwin Core standardization of species checklists and observations from a wide-range of sources and their publication to the Global Biodiversity Information Facility. We also aim to propose controlled vocabularies for alien species related Darwin Core terms where these data are needed for downstream analysis.

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Challenges include entrenched non-standard working methods, heterogeneity of data availability, and the sheer complexity of the biosphere itself. We will discuss our plans, the obstacles and potential solutions. Furthermore, we look to the future for what we might be able to achieve if we are successful.

Keywords

invasive species, biodiversity informatics, policy advice

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